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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JASON CLAY PEARSON, MAX ALLEN WEAVER, and  
MICHAEL JOHN CYR

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Appeal 2009-003791  
Application 10/659,225  
Technology Center 1700

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Decided: September 29, 2009

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Before ADRIENE LEPIANE HANLON, CHARLES F. WARREN, and  
PETER F. KRATZ, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

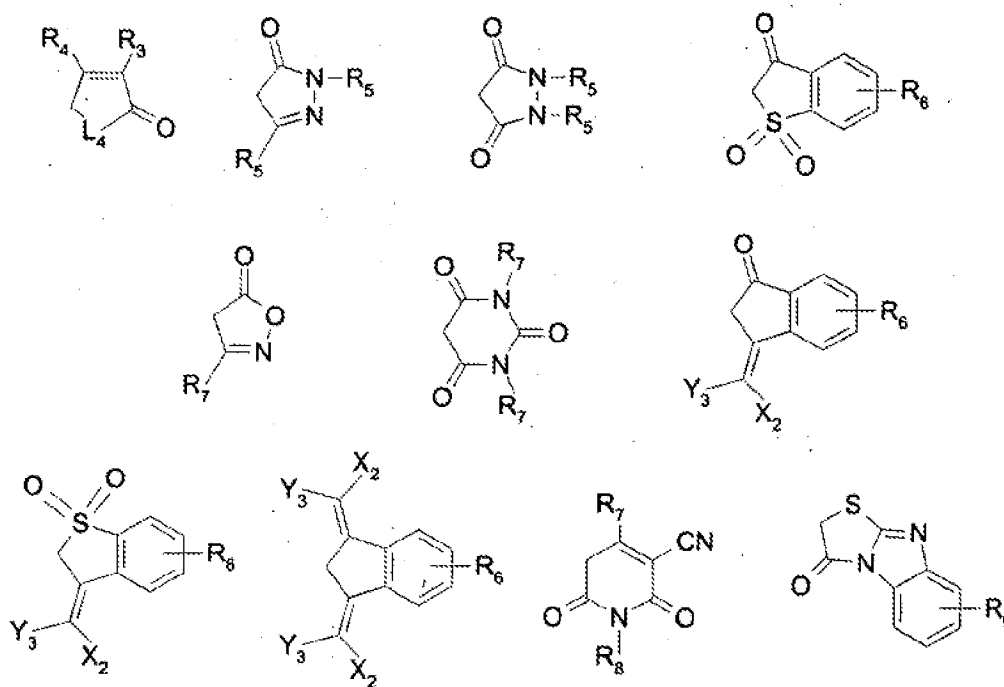
DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 53, 59, 65-69, and 71. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellants' claimed invention is directed to a composition consisting essentially of polyester and a cyclic active methylene compound additive capable of reacting with acetaldehyde to form a new carbon-carbon double bond and of a formula as specified in claim 59 below.<sup>1</sup>

Claim 53<sup>2</sup> and 59 are illustrative and reproduced below:

53. A polyester composition consisting essentially of:
- (a) a polyester; and
  - (b) at least one additive that is capable of reacting with acetaldehyde to form a new carbon-carbon bond, said additive selected from the group consisting of cyclic active methylene compounds represented by the following formulae:

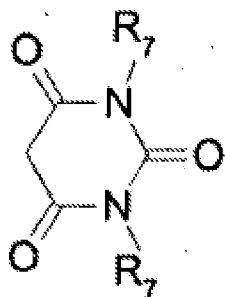


<sup>1</sup> Appellants identified formula for the elected species of the claimed additive corresponds to the claim 59 formula (*see* App. Br. 8 and claim 59). *See Ex parte Ohsaka*, 2 USPQ2d 1460, 1461 (BPAI 1987).

<sup>2</sup> The term "aryl" is defined in the Specification (Spec. 10-11).

wherein R<sub>3</sub> is selected from C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, cyano, heteroaryl;  
wherein R<sub>4</sub> is selected from aryl and heteroaryl;  
wherein R<sub>5</sub> is selected from hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, substituted C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl and aryl;  
wherein R<sub>6</sub> is selected from hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, halogen, cyano, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, trifluoromethyl, hydroxy, C<sub>1</sub>-C<sub>6</sub>-alkanoyloxy, aroyl, C<sub>1</sub>-C<sub>6</sub>-alkylthio, C<sub>1</sub>-C<sub>6</sub>-alkysulfonyl, carbamoyl, sulfamoyl -NHCOR<sub>9</sub>, -NHSO<sub>2</sub>R<sub>9</sub>, -CONHR<sub>9</sub>, -CON(R<sub>9</sub>)<sub>2</sub>, -SO<sub>2</sub>NHR<sub>9</sub> and -SO<sub>2</sub>N(R<sub>9</sub>)<sub>2</sub>; wherein R<sub>9</sub> is selected from C<sub>1</sub>-C<sub>6</sub>-alkyl, substituted C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl and aryl;  
wherein R<sub>7</sub> is selected from hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, and aryl;  
wherein X<sub>2</sub> and Y<sub>3</sub> are independently selected from cyano, C<sub>1</sub>-C<sub>6</sub>-alkylsulfonyl, arylsulfonyl and C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl;  
wherein R<sub>8</sub> is selected from hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, substituted C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, C<sub>3</sub>-C<sub>8</sub>-alkenyl, C<sub>3</sub>-C<sub>8</sub>-alkynyl and aryl; and  
wherein L<sub>4</sub> is selected from -O-, -S- and -N(R<sub>10</sub>)-, wherein R<sub>10</sub> is selected from hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl and aryl.

59. The polyester composition of claim 53 wherein the additive is a compound having the general formula:



The Examiner relies on the following prior art reference as evidence in rejecting the appealed claims:

Harashina

7,115,677 B2

Oct. 3, 2006

Claims 53, 59, 65-69, and 71 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Harashina.<sup>3</sup> We affirm the stated rejection for reasons set forth in the Examiner's Answer. Our reasoning follows.

At the outset, we note that Appellants argue the rejected claims as a group. Consequently, we shall focus on independent claim 53, and particularly the elected species within the scope thereof as identified in dependent claim 59 and as addressed by the Examiner and Appellants, in deciding this appeal.

### PRINCIPAL ISSUE

Have Appellants established reversible error in the Examiner's obviousness rejection by arguing that appealed claim 53 does not include a flame retardant B1-B3, a sizing agent, and/or inorganic filler as disclosed by Harashina, as their inclusion would materially change Appellants' claimed polyester composition.

### PRINCIPLES OF LAW

On appeal to this Board, Appellants must show that the Examiner erred in finally rejecting the claims. *Cf. In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006); *see also* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

A claimed invention is not patentable if the subject matter of the claimed invention would have been obvious to a person having ordinary skill

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<sup>3</sup> Appellants contest a requirement of the Examiner to cancel certain claims allegedly directed to non-elected species (App. Br. 10). However, this petitionable matter is not before us for review on appeal.

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in the art. 35 U.S.C. § 103(a); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007); *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

Pending claim terms are given their broadest reasonable construction as they would be understood by one of ordinary skill in the art when read in light of the Specification. “When the applicant states [in his or her specification] the meaning that the claim terms are intended to have, the claims are examined with that meaning . . .” *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989).

The “phrase ‘consisting essentially of’ limits the scope of a claim to the specified ingredients and those that do not *materially affect* the *basic* and *novel* characteristic(s) of a composition.” *In re Herz*, 537 F.2d 549, 551-52 (CCPA 1976) (emphasis added); *see also PPG Indus., Inc. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1354 (Fed. Cir. 1998) (“By using the term ‘consisting essentially of,’ the drafter signals that the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and novel properties of the invention”).

It is appropriate that Appellant bears the burden of establishing that the basic and novel characteristics of their claimed invention would be materially affected by, or at least reasonably expected to be materially affected by, any component or step of an applied reference that is argued to be excluded by a “consisting essentially of” transitional phrase used in the claims. *See In re De Lajarte*, 337 F.2d 870, 873-74 (CCPA 1964); *Ex parte Hoffman*, 12 USPQ2d 1061, 1063-64 (BPAI 1989).

## FINDINGS OF FACT

The Examiner has found that Harashina discloses or suggests a flame-retardant composition that includes a polyester resin (A), a flame retardant

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(B) including components B1- B3, and a filler treated with a surface treating agent or sizing agent containing a novolak epoxy resin (C) (Ans. 4-5; Harashina, col. 2, l. 20- col. 3, l. 50). Appellants do not dispute this determination by the Examiner.

The Examiner has determined that Harashina teaches or suggests that a cyclic monoureide compound that can be selected as a nitrogen-containing flame retardant and added to the composition can include a barbituric acid (5,5-diethylbarbituric acid) or a derivative thereof (Ans. 5; Harashina, col. 26, ll. 34-35).

The Examiner has determined that the barbituric acid, which is taught by Harashina as a flame retardant additive corresponds to Appellants' elected species of additive (Ans. 6). Appellants do not dispute this determination of the Examiner.

The Examiner has determined that, because the barbituric acid of Harashina is structurally analogous to Appellants' claimed additive, it would reasonably be expected to possess the claimed acetaldehyde reaction property recited in Appellants' independent claim 53.

The Specification provides that:

Although not necessarily preferred, the polymers of the present invention may also include additives normally used in polymers. Illustrative of such additives known in the art are glass fibers, fillers, impact modifiers, antioxidants, stabilizers, flame retardants, crystallization aids, recycling release aids, oxygen scavengers, plasticizers, nucleators, mold release agents, compatibilizers, and the like, or their combinations.

Spec. 14.

The Specification discloses the use of recycle material in the claimed composition (Spec. 8).

The Specification discloses that infrared absorbing compounds, lubricants, inorganic mineral composites, talc, and the like can be included in the composition (Spec. 13-14).

### ANALYSIS

At the outset, we note that Appellants do not argue that the polyester base resin and barbituric acid component of the composition of Harashina fail to teach or suggest the claimed polyester and reactive additive components required by independent claim 53 (see elected specie formula claim 59). Rather, Appellants argue that the basic and novel characteristic of the here claimed composition is such that the flame retardants (B1-B3) and inorganic filler treated with a Novolak epoxy resin included in the composition of Harashina would be precluded from the here-claimed composition (App. Br. 11). We disagree in light of the factual findings set forth above and in the Examiner's Answer.

The subject Specification suggests that the basic and novel characteristics of the claimed composition relates to employing an acetaldehyde reactive compound with a polyester composition for providing for such reaction (Spec. 4, ll. 16-20). Appellants have not reasonably substantiated that the flame retardants and/or inorganic filler of Harashina would materially affect the basic and novel characteristics of their invention. Indeed, as noted above, Appellants' Specification provides for a plethora of additives that are disclosed as being useful with the claimed composition, including fillers and flame retardants (Spec. 14). Moreover, the Specification indicates that recycle material and other ingredients identified therein, such as lubricants, infrared absorbing compounds, talc, etc. are suitable additives (Spec. 8, 13, and 14).



Given the above and for reasons set forth in the Examiner's Answer, Appellant's arguments do not convince us that the "consisting essentially of" language employed in representative independent claim 53 requires exclusion of the argued flame retardants and/or filler that are also used by Harashina. Consequently, Appellant has not fairly established reversible error in the obviousness rejection of the appealed claims.

Appellants' additional passing remark directed at the claimed forming a new carbon-carbon bond functional property of the additive required by independent claim 53 (see elected species claim 59) is not substantiated with any persuasive reasoning or evidence to establish that the additive barbituric acid of Harashina would not possess the claimed functionality, particularly given Appellants' acquiescence in the Examiner's position that the barbituric acid of Harashina corresponds to the claimed additive compound requirements in terms of chemical structure (Ans. 6, *see generally* App. Br.).

In sum, Appellants' burden of production is not met by the presented arguments. This is because the tendered arguments do not furnish a reasonably persuasive showing establishing that the fillers and flame retardants or other components of the applied reference are required components that cannot be excluded with their respective functions and that would have materially affected the basic and novel characteristics of the claimed composition. Nor have Appellants presented any other argument that identifies reversible error in the Examiner's obviousness determination.

On this record, we sustain the Examiner's obviousness rejection.

## CONCLUSION

Appellants have not established reversible error in the Examiner's obviousness rejection by arguing that appealed claim 53 does not include a

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flame retardant B1-B3, a sizing agent, and/or an inorganic filler as disclosed by Harashina based on the transitional claim term “consisting essentially of” because Appellants have not established that the inclusion of the argued for excluded items of the applied references would have materially affected the basic and novel characteristics of the claimed composition.

### ORDER

The Examiner’s decision to reject claims 53, 59, 65-69, and 71 under 35 U.S.C. § 103(a) as being unpatentable over Harashina is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(v).

AFFIRMED

tc

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